

CLAIMS:

1. Method of measuring the stress/strain by means of the Barkhausen noise, characterized in that an exciting/sensing device (1; 2,3; 2,7) is arranged at least adjacent to a magnetic or magnetizable element (4; 5), in that the exciting device (1; 2) is acted upon by a rising magnetizing current, in that the start of the Barkhausen noise in the element (4; 5) is detected as a function of the magnetizing current by means of the sensing device (1; 3; 7), the starting of the Barkhausen noise representing a measurement of the stress/strain condition of the element (4; 5).

2. Method according to Claim 1, characterized in that the start of the Barkhausen noise is determined by comparative measurements using reference values.

3. Method according to Claim 1 or 2, characterized in that a pulsed magnetizing current is used, the sensing device (1; 3; 7) detecting the signal of the Barkhausen noise during the off-time of the pulses.

4. Method according to one of Claims 1 to 3,

characterized in that an intermediate element (5') made of non-magnetic or non-magnetizable material is arranged between the magnetic or magnetizable element (4) and a structure (6) to be connected therewith.

5. Method according to one of Claims 1 to 3, characterized in that, before the determination of its stress/strain condition, the magnetic or magnetizable element (5) is arranged between a non-magnetic or non-magnetizable fastening element (4') and a structure (6) to be connected therewith.

6. Method according to one of the preceding claims, characterized in that the magnetizing current is proportional to the internal stress of the element (4; 5).

7. Use of the method according to one of the preceding claims for measuring stress/strain conditions in screwed, inserted or riveted fastening devices.